

What is claimed is:

1. A light source unit comprising: an arc tube having a light emitting section in which discharging emission is performed between electrodes and sealed sections provided on both sides of the light emitting section; an oval reflector having a reflecting surface of a substantially oval shape for emitting a luminous flux radiated from the arc tube in a certain direction; a collimator lens for parallelizing convergent rays from the oval reflector; a lamp housing for setting the direction of an optical axis of the oval reflector, the lamp housing including a lens positioning member in which the collimator lens is fixed,

wherein the collimator lens is positioned and fixed to the lamp housing by the lens positioning member in a state in which the optical axis of the oval reflector and an optical axis of the collimator lens are aligned.

2. A light source unit according to Claim 1, wherein the lens positioning member is formed integrally with the lamp housing.

3. A light source unit according to Claim 1, wherein the collimator lens is fixed to the lens positioning member by thermal caulking.

4. A light source unit according to Claim 1, wherein the collimator lens is fixed to the positioning member

with an adhesive agent.

5. A light source unit according to Claim 4, wherein the collimator lens is formed with a flange on the outer periphery thereof.

6. A light source unit according to Claim 4, wherein an entire outer peripheral surface of the collimator lens is adhered and fixed to the lens positioning member.

7. A light source unit according to Claim 5, wherein an angle of the extremity of the flange formed around the outer periphery of the collimator lens is an acute angle between 30° and 90°.

8. A projector for forming an optical image by modulating a luminous flux emitted from a light source according to image information and projecting the enlarged image, wherein the light source unit according to any one of Claims 1 to 7 is provided.

9. A light source unit according to Claim 8, wherein the lens positioning member is formed integrally with the lamp housing.

10. A light source unit according to Claim 8, wherein the collimator lens is fixed to the lens positioning member by thermal caulking.

11. A light source unit according to Claim 8, wherein the collimator lens is fixed to the positioning member with an adhesive agent.

12. A light source unit according to Claim 11, wherein the collimator lens is formed with a flange on the outer periphery thereof.

13. A light source unit according to Claim 11, wherein the entire peripheral surface of the collimator lens is adhered and fixed to the lens positioning member.

14. A light source unit according to Claim 12, wherein the angle of the extremity of the flange formed around the outer periphery of the collimator lens is an acute angle between  $30^{\circ}$  and  $90^{\circ}$ .

15. A method of manufacturing a light source unit comprising: an arc tube having a light emitting section in which discharging emission is performed between electrodes and sealed sections provided on both sides of the light emitting section; an oval reflector having a reflecting surface of a substantially oval shape for emitting a luminous flux radiated from the arc tube in a certain direction; a collimator lens for parallelizing convergent rays from the oval reflector; a lamp housing for setting the direction of an optical axis of the oval reflector, and a lens positioning member provided in the lamp housing for fixedly accommodating the collimator lens, comprising the steps of:

fixing the oval reflector positioned with respect to the arc tube to the arc tube so that most part of light

radiated from the arc tube is emitted from the oval reflector as convergent rays converging toward a second focal point of the oval reflector;

fixing the lamp housing fixed to the arc tube to the lamp housing;

fitting the collimator lens to the lens positioning member;

adjusting the position of the collimator lens with respect to the lens positioning member so that optimal distribution of an illumination intensity of the luminous flux, which is emitted from the arc tube, reflected by the oval reflector and parallelized by the collimator lens, is achieved; and

fixing the collimator lens which is positioned with respect to the lens positioning member to the lens positioning member.

16. A method of manufacturing a light source unit according to Claim 15, wherein

the collimator lens is formed with the flange on the outer periphery thereof;

the step of fitting the collimator lens into the lens positioning member is performed by allowing grip means to grip the flange formed on the outer periphery of the collimator lens, mounting the collimator lens to the grip means, and fitting the collimator lens to the lens

positioning member in a state in which the collimator lens is mounted to the grip means;

the step of positioning the collimator lens with respect to the lens positioning member is performed by moving the grip means; and

the step of fixing the collimator lens to the positioning member is performed by adhering the outer peripheral portion of the collimator lens which is not gripped by the grip means to the lens positioning member with the adhesive agent; removing the grip means from the collimator lens; adhering the outer peripheral portion of the collimator lens at the positions between the outer peripheral portion of the collimator lens and the lens positioning member on which the adhesive agent is not applied and the lens positioning member with the adhesive agent; and adhering and fixing the entire surface of the outer peripheral portion of the collimator lens to the lens positioning member.

17. A method of manufacturing a light source unit according to Claim 15, wherein positioning of the collimator lens with respect to the lens positioning member is performed in the direction perpendicular to the direction of the optical axis of the collimator lens.

18. A method of manufacturing a light source unit according to Claim 15, positioning of the collimator lens

with respect to the lens positioning member is performed in the direction perpendicular to the direction of the optical axis of the collimator lens and in the direction of the optical axis.

19. A projector for forming an optical image by modulating a luminous flux emitted from a light source according to image information and projecting the enlarged image, wherein a light source unit manufactured by a method of manufacturing the light source unit according to Claim 15 is provided.

20. A method of manufacturing a light source unit according to Claim 19, the collimator lens is formed with the flange on the outer periphery thereof;

the step of fitting the collimator lens into the lens positioning member is performed by allowing grip means to grip the flange formed on the outer periphery of the collimator lens, mounting the collimator lens to the grip means, and fitting the collimator lens to the lens positioning member in a state in which the collimator lens is mounted to the grip means;

the step of positioning the collimator lens with respect to the lens positioning member is performed by moving the grip means; and

the step of fixing the collimator lens to the positioning member is performed by adhering the outer

peripheral portion of the collimator lens which is not gripped by the grip means to the lens positioning member with the adhesive agent; removing the grip means from the collimator lens; adhering the outer peripheral portion of the collimator lens at the positions between the outer peripheral portion of the collimator lens and the lens positioning member on which the adhesive agent is not applied and the lens positioning member with the adhesive agent; and adhering and fixing the entire surface of the outer peripheral portion of the collimator lens to the lens positioning member.

21. A method of manufacturing a light source unit according to Claim 19, wherein positioning of the collimator lens with respect to the lens positioning member is performed in the direction perpendicular to the direction of the optical axis of the collimator lens.

22. A method of manufacturing a light source unit according to Claim 19, positioning of the collimator lens with respect to the lens positioning member is performed in the direction perpendicular to the direction of the optical axis of the collimator lens and in the direction of the optical axis.